DOCUMENT RESUME

ED 442 190 EA 030 436

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TITLE Student Achievement in SREB States: How Do SREB States Compare with the Nation? Is Student Achievement Improving? What Problems Remain? Educational Benchmarks 2000 Series.
INSTITUTION Southern Regional Education Board, Atlanta, GA.
PUB DATE 2000-04-00
NOTE 25p.
PUB TYPE Reports - Evaluative (142)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; *Achievement Tests; Comparative Analysis; Elementary Secondary Education; Ethnic Groups; *Low Income Groups; *Performance Based Assessment; Public Schools; *Racial Factors; *Underachievement
IDENTIFIERS *Southern Regional Education Board

ABSTRACT

This report uses the most recent results from the National Assessment of Educational Progress (in mathematics, reading, science, and writing); the Advanced Placement Program; national college-admissions tests (ACT and SAT); and national norm-referenced tests used in statewide testing programs to compare SREB states to the nation in improved student achievement. It offers lessons learned from a decade of states' efforts to improve student achievement and answers three questions: (1) Where do students in the SREB states stand relative to national averages? (2) Is student achievement in SREB states improving? and (3) What challenges remain for SREB states? Several SREB states have reached or exceeded the national average for some measures of student achievement, but none has reached that goal for most measures of student achievement. All SREB states have improved on at least 1 measure of student achievement over the last 10 years. Although the last decade has seen improvements in the amount and quality of information about ways to raise student performance, there continues to be unacceptably large gaps among the achievement levels of students from different racial and ethnic backgrounds and from different income levels. (DFR)

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ED 442 190

SREB

# Student Achievement in SREB States —

*How do SREB states compare with the nation?*

*Is student achievement improving?*

*What problems remain?*

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April 2000

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EDUCATIONAL BENCHMARKS 2000 SERIES

# Goals for Education: Challenge 2000

BY THE YEAR 2000—

*All children will be ready for first grade.*

*Student achievement for elementary and secondary students will be at national levels or higher.*

*The school dropout rate will be reduced by one-half.*

*90 percent of adults will have a high school diploma or its equivalent.*

*Four of every five students entering college will be ready to begin college-level work.*

*Significant gains will be achieved in the mathematics, sciences and communications competencies of vocational education students.*

*The percentage of adults who have attended college or earned two-year, four-year and graduate degrees will be at the national averages or higher.*

*The quality and effectiveness of all colleges and universities will be regularly assessed, with particular emphasis on the performance of undergraduate students.*

*All institutions that prepare teachers will have effective teacher-education programs that place primary emphasis on the knowledge and performance of graduates.*

*All states and localities will have schools with improved performance and productivity demonstrated by results.*

*Salaries for teachers and faculty will be competitive in the marketplace, will reach important benchmarks and will be linked to performance measures and standards.*

*States will maintain or increase the proportion of state tax dollars for schools and colleges while emphasizing funding aimed at raising quality and productivity.*

The SREB Commission for Educational Quality, 1988

# STUDENT ACHIEVEMENT

BY THE YEAR 2000—

***Student achievement for elementary and secondary students will be at national levels or higher.***

- **Where do SREB states stand in their efforts to improve education?**
- **Is student achievement improving?**
- **What challenges remain?**

## *Where do SREB states stand?*

Several SREB states meet or exceed the national averages on some measures of student achievement, but no SREB state has reached that goal on most national measures of student achievement.

In the late 1980s, the credibility of student achievement testing came into question because nearly all states had scores that were "at or above the national average" on some national norm-referenced test. With several "national" tests — each used by only a few states — and with national averages that often changed only once in 10 years, there were statistical explanations for how virtually every state could be above some "national average." Comparable state-by-state results were not available from the National Assessment of Educational Progress until the 1990s.

Since the early 1990s, the focus has been on trying to decide "how good is good enough" in student achievement. The National Assessment Governing Board, which oversees the National Assessment of Educational Progress, has made an important contribution toward answering this key question by establishing standards for basic, proficient and advanced levels of performance. These performance standards provide external benchmarks against which states can compare results from their own testing programs and from national norm-referenced tests.

Every SREB state participated in the 1998 National Assessment and can compare the performance of its fourth- and eighth-graders with that of fourth- and eighth-graders elsewhere in the region and the nation. The assessment measures student performance in reading, mathematics, science and writing.

States are developing new achievement tests, and some have been put into place. State leaders will need to consider all of the information they can obtain as they seek to determine where their state stands.

*Is student achievement improving?*

In the last 10 years, every SREB state has improved on some measure of student achievement. All SREB states are doing a better job of gathering the information necessary to measure changes in student achievement.

- A decade ago, fewer than half of the SREB states reported student achievement results for individual groups of students — black, white, Hispanic, Asian and Native American — and for boys and girls. Every SREB state now reports this detailed information.
- A decade ago, few SREB states required all students to complete Algebra I to graduate from high school. Today, most do.
- In 1988, only four SREB states had at least 60 percent of their public schools participating in the Advanced Placement Program. Last year, 10 states had more than 60 percent of their public schools in the program, and SREB states led the nation in growth of the Advanced Placement Program.
- In 1987, only 30 percent of students who graduated from high schools in the South completed four credits in English and three credits each in mathematics, science and social studies. By the late 1990s, 60 percent met these criteria.

SREB states are at another critical juncture in improving student achievement for all students. As student assessments become part of states' comprehensive accountability programs, it is important that they be accurate measures of student achievement and be useful for school improvement.

*What major challenges remain for SREB states?*

- Defining what students should know and setting standards for how well they need to read, write, compute and solve problems.
- Measuring student achievement as part of a state accountability system.
- Finding effective ways to help *all students* meet high expectations.

This Educational Benchmarks 2000 Series report shows how far we have come and describes the challenges ahead.

Mark Musick
SREB President

# Student Achievement in SREB States —

## *How do SREB states compare with the nation?*

## *Is student achievement improving?*

## *What problems remain?*

This report answers three questions:

1. *Where do students in the SREB states stand relative to national averages?*
2. *Is student achievement in SREB states improving?*
3. *What challenges remain for SREB states?*

- Several SREB states have reached or exceeded the national averages for some measures of student achievement, but none has reached that goal for most measures of student achievement.
- All SREB states have improved on at least one measure of student achievement over the last 10 years.
- Most SREB states are revising their expectations of what students should know and be able to do and are linking these expectations more directly to their assessments of student achievement.
- There continue to be unacceptably large gaps among the achievement levels of students from different racial and ethnic backgrounds and from different income levels.
- The last decade has seen improvements in the amount and quality of information about ways to raise student achievement.

To show how SREB states compare with the nation and how they have improved student achievement, this report uses the most recent results from the National Assessment of Educational Progress (in mathematics, reading, science and writing); the Advanced Placement Program; national college-admissions tests (ACT and SAT); and national norm-referenced tests used in statewide testing programs.

This report was prepared by Joseph D. Creech, SREB director of educational policies.

*Question:*

# "National averages": How do SREB states compare?

## *The National Assessment of Educational Progress*

Eight SREB states — Kentucky, Maryland, North Carolina, Oklahoma, Tennessee, Texas, Virginia and West Virginia — met or exceeded the national average in the percentage of students who scored at or above the proficient level in at least one area (mathematics, reading, science or writing) on the most recent assessments.

The National Assessment of Educational Progress is the most credible source of information to compare student achievement in different states, and the National Assessment Governing Board has defined the following levels of performance:

- "Basic" means that students have partially mastered the fundamental knowledge and skills for each grade level.
- "Proficient" means that students have demonstrated competency over challenging subject matter.
- "Advanced" means that students have shown superior performance.

Too few students nationwide — and even fewer in most SREB states — reach the proficient levels in mathematics, reading, science and writing. Even if one considers the National Assessment Governing Board's definition of "proficient" or "good enough" too rigorous, the percentages of fourth- and eighth-graders scoring below the "basic" (partial mastery) level are generally between one-third and one-half of students.

The following is a look at how students in SREB states performed in comparison with students nationwide.

### Mathematics

- Twenty percent of the nation's fourth-grade students scored at or above the National Assessment's proficient level in mathematics. Three SREB states — Maryland, 22 percent; North Carolina, 21 percent; and Texas, 25 percent — exceeded the national average. Virginia and West Virginia were close to the national average, with 19 percent of fourth-graders at the proficient level. Nationally, 62 percent of fourth-graders scored at or above the basic level; four SREB states — North Carolina, Texas, Virginia and West Virginia — met or exceeded that average.
- Twenty-three percent of the nation's eighth-graders scored at or above the proficient level in mathematics. Among the SREB states, only Maryland (24 percent) exceeded the national average. Three SREB states came close to the national average: North Carolina (20 percent), Texas (21 percent) and Virginia (21 percent). No SREB state reached the national average of 61 percent of eighth-graders at or above the basic level in mathematics.

## Reading

- Twenty-nine percent of fourth-graders nationwide scored at or above the proficient level. Six SREB states — Kentucky, Maryland, Oklahoma, Texas, Virginia and West Virginia — met or exceeded this average, and North Carolina (28 percent) was within one percentage point.

Table 1

**Percentages of fourth- and eighth-graders at or above the *proficient* standard on the National Assessment of Educational Progress**

*(Shading indicates states at or above the national average.)*

| | Mathematics (1996) | | Reading (1998) | | Science (1998) | Writing (1998) |
|---|---|---|---|---|---|---|
| | Fourth grade | Eighth grade | Fourth grade | Eighth grade | Eighth grade | Eighth grade |
| Nation | 20 | 23 | 29 | 30 | 27 | 24 |
| Alabama | 11 | 12 | 24 | 21 | 18 | 17 |
| Arkansas | 13 | 13 | 23 | 23 | 22 | 13 |
| Delaware | 16 | 19 | 25 | 25 | 21 | 22 |
| Florida | 15 | 17 | 23 | 23 | 21 | 19 |
| Georgia | 13 | 16 | 24 | 25 | 21 | 23 |
| Kentucky | 16 | 16 | 29 | 29 | 23 | 21 |
| Louisiana | 8 | 7 | 19 | 18 | 13 | 12 |
| Maryland | 22 | 24 | 29 | 31 | 25 | 23 |
| Mississippi | 8 | 7 | 18 | 19 | 12 | 11 |
| North Carolina | 21 | 20 | 28 | 31 | 24 | 27 |
| Oklahoma | — | — | 30 | 29 | — | 25 |
| South Carolina | 12 | 14 | 22 | 22 | 17 | 15 |
| Tennessee | 17 | 15 | 25 | 26 | 22 | 24 |
| Texas | 25 | 21 | 29 | 28 | 23 | 31 |
| Virginia | 19 | 21 | 30 | 33 | 27 | 27 |
| West Virginia | 19 | 14 | 29 | 27 | 21 | 18 |

Note: Oklahoma did not participate in the 1996 mathematics and the 1998 science assessments.

Source: National Center for Education Statistics

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- Thirty percent of the nation's eighth-graders scored at or above the proficient level in reading. Maryland, North Carolina and Virginia exceeded this level, and Kentucky and Oklahoma were within one percentage point of meeting the national average.

Table 2

**Percentages of fourth- and eighth-graders at or above the *basic* standard on the National Assessment of Educational Progress**

*(Shading indicates states at or above the national average.)*

| | Mathematics (1996) | | Reading (1998) | | Science (1998) | Writing (1998) |
|---|---|---|---|---|---|---|
| | Fourth grade | Eighth grade | Fourth grade | Eighth grade | Eighth grade | Eighth grade |
| Nation | 62 | 61 | 60 | 70 | 60 | 83 |
| Alabama | 48 | 45 | 56 | 66 | 47 | 83 |
| Arkansas | 54 | 52 | 55 | 68 | 55 | 77 |
| Delaware | 54 | 55 | 57 | 66 | 51 | 80 |
| Florida | 55 | 54 | 54 | 65 | 51 | 78 |
| Georgia | 53 | 51 | 55 | 68 | 49 | 83 |
| Kentucky | 60 | 56 | 63 | 74 | 58 | 84 |
| Louisiana | 44 | 38 | 48 | 64 | 40 | 75 |
| Maryland | 59 | 57 | 61 | 72 | 55 | 83 |
| Mississippi | 42 | 36 | 48 | 61 | 39 | 74 |
| North Carolina | 64 | 56 | 62 | 76 | 56 | 85 |
| Oklahoma | — | — | 66 | 80 | — | 88 |
| South Carolina | 48 | 48 | 55 | 65 | 45 | 79 |
| Tennessee | 58 | 53 | 58 | 71 | 53 | 84 |
| Texas | 69 | 59 | 63 | 76 | 55 | 88 |
| Virginia | 62 | 58 | 64 | 78 | 59 | 89 |
| West Virginia | 63 | 54 | 62 | 74 | 56 | 82 |

Note: Oklahoma did not participate in the 1996 mathematics and the 1998 science assessments.

Source: National Center for Education Statistics

- Sixty percent of fourth-graders and 70 percent of eighth-graders nationwide were at or above the basic levels in reading. Almost half of the SREB states exceeded the national averages.

**Science**

- Twenty-seven percent of eighth-graders nationwide scored at or above the proficient level in science; Virginia was the only SREB state to match this percentage. No SREB state met the national average of eighth-graders who scored at or above the basic level.

**Writing**

- Nearly one-fourth — 24 percent — of the nation's eighth-graders scored at or above the proficient level for writing. Five SREB states — North Carolina, Oklahoma, Tennessee, Texas and Virginia — met or exceeded that level. Maryland (23 percent) came within one percentage point of the national average. In nine SREB states — Alabama, Georgia, Kentucky, Maryland, North Carolina, Oklahoma, Tennessee, Texas and Virginia — the percentages of eighth-graders at or above the basic level for writing met or exceeded the national average of 83 percent. West Virginia was within one percentage point.

## *The Advanced Placement examinations*

Through the Advanced Placement Program, students can take college-level courses while they are in high school. The program represents high-quality content and provides a national standard for judging student performance. Examinations are scored on a scale of 1 (lowest) to 5 (highest). A score of 3 is high enough to earn credit at most colleges and universities.

Since 1988, SREB states have led the nation in increasing both the number of students who take Advanced Placement examinations and the number of public schools that participate in the program.[1]

- In 1999, almost 194,000 students in SREB states — more than the number of high school graduates in Texas that year — took Advanced Placement examinations. Half of the SREB states have higher rates of juniors and seniors who take the examinations than does the nation.
- The national average of public schools that participate in the Advanced Placement Program is 60 percent. Ten SREB states — Delaware, Florida, Georgia, Kentucky, Maryland, North Carolina, South Carolina, Texas, Virginia and West Virginia — have higher percentages of public schools participating.
- In five SREB states — Delaware, Louisiana, Maryland, Tennessee and Virginia — at least 60 percent of Advanced Placement examinations received scores of 3 or higher. The national average was 64 percent.

[1] A participating school is one in which at least one student takes an Advanced Placement examination.

Table 3
**Advanced Placement Program in SREB states, public schools, 1999**
*(Shading indicates states at or above the national average.)*

| | Percent of public schools participating | Number of students taking examinations | Examinations per 1,000 juniors and seniors in high school | Percent of examinations with scores of 3 or higher |
|---|---|---|---|---|
| Nation | 60 | 568,021 | 165 | 64 |
| Alabama | 43 | 4,727 | 82 | 58 |
| Arkansas | 31 | 2,967 | 72 | 52 |
| Delaware | 92 | 1,056 | 182 | 73 |
| Florida | 82 | 34,615 | 226 | 57 |
| Georgia | 77 | 15,209 | 169 | 59 |
| Kentucky | 67 | 5,315 | 112 | 50 |
| Louisiana | 20 | 1,659 | 46 | 64 |
| Maryland | 92 | 13,742 | 234 | 71 |
| Mississippi | 36 | 2,215 | 65 | 40 |
| North Carolina | 89 | 17,941 | 219 | 57 |
| Oklahoma | 33 | 5,050 | 93 | 58 |
| South Carolina | 90 | 9,402 | 193 | 56 |
| Tennessee | 53 | 6,544 | 121 | 65 |
| Texas | 64 | 46,810 | 178 | 56 |
| Virginia | 83 | 24,647 | 302 | 63 |
| West Virginia | 61 | 2,039 | 72 | 56 |

Source: The College Board, 1999

## *National norm-referenced tests used by SREB states*

Thirteen SREB states used national norm-referenced tests in 1998-99. In nine of these states, students performed better than the national average.

SREB states use several different tests — each of which also produces a different national average — to measure student achievement at various grade levels. No test is used in every state; no more than five SREB states use any given test. The tests often are called "national" tests because they can be purchased nationwide and include national averages among their results.

These national tests compare students' performance against that of their peers, not against a set of performance standards. That is, the results do not make conclusions about what level is "good enough" or "proficient" and what level is "not good enough." Most SREB states that use national tests report that their students score "above the national average" in some or all subjects and grades. For example, the typical fourth-grader in the nation would score at the 50th percentile of the national norm. Half of the fourth-graders in the national sample scored above that student, and half scored below. If a state's average rank is above the 50th percentile, the typical student in that state performed better than the typical student in the nation. Table 4 shows that reading scores in many SREB states are above the national averages for grades seven through nine.

States not only use different tests but also administer the tests to students in different grades and at different times of the year. As a result, it is virtually impossible to compare results from one state to another.

Table 4

**Reading achievement on national norm-referenced tests, SREB states, 1998-99 school year**

*(Shading indicates states at or above national averages.)*

| State | Test | Grade level | Average percentile rank |
|---|---|---|---|
| Alabama | Stanford 9 | 8th | 54 |
| Arkansas | Stanford 9 | 7th | 47 |
| Delaware | Stanford 9 | 8th | 55 |
| Virginia | Stanford 9 | 8th | 58 |
| West Virginia | Stanford 9 | 8th | 61 |
| Georgia | Iowa Test of Basic Skills | 8th | 49 |
| Louisiana | Iowa Test of Basic Skills | 7th | 41 |
| Mississippi | Iowa Test of Basic Skills | 8th | 51 |
| North Carolina | Iowa Test of Basic Skills | 8th | 52 |
| Oklahoma | Iowa Test of Basic Skills | 7th | 58 |
| South Carolina | Terra Nova | 9th | 45 |
| Tennessee | Terra Nova | 8th | 58 |
| Kentucky | Comprehensive Test of Basic Skills | 9th | 51 |

Sources: SREB survey of state education agencies and annual testing reports from the states

## *College admissions tests: The ACT and SAT*

The best-known college-admissions tests are the ACT and the SAT. In eight SREB states, most high school seniors take the ACT; in eight others, most high school seniors take the SAT.

College admissions tests such as the ACT and SAT — combined with other measures of student achievement (grades, rank in high school class, recommendations, etc.) — are used by colleges to identify students who are most likely to succeed in their programs. The tests are a way to compare students who attended different schools that had different curricula and grading systems. The ACT describes the skills that generally are required for each level of scores. For example, to achieve a mid-range score of 21 a student would need college-level skills, as illustrated by specific knowledge and the ability to solve specific kinds of problems. A student with a score of 15 would demonstrate pre-college mathematics skills. Generally, each college or university determines the minimum scores that students should have on these tests and on college placement tests that are used to assign students to the appropriate levels of courses.

Many factors make it difficult to compare states' average scores. One obstacle is the fact that a state's average score for a certain test can be skewed by the number of students who take that test. Students who take a college admissions test other than the one commonly used in their state generally are students who excel in school and apply to a variety of colleges in other states. As a result, the average scores tend to be higher when a small percentage of high school seniors in a state take the test. For example, average SAT scores are higher in states in which only 5 percent to 10 percent of high school seniors take the SAT than in states in which more than 50 percent of high school seniors take that test. Not surprisingly, only 8 percent of high school seniors take the SAT in the SREB state that has the highest average score for that test. It is meaningless to compare this state's average SAT score with the average for a state in which 65 percent of seniors take the SAT. When comparisons are made only among states in which most seniors take a certain test, averages for SREB states generally are below those for states outside the region.

- The composite scores on the ACT are reported on a scale of 1 to 36. The national average in 1999 was 21. Many colleges and universities suggest that students whose scores are lower than 19 may need remedial courses before beginning college-level work. Among the eight SREB states — Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee and West Virginia — in which most seniors took the ACT, the average scores ranged from 18.7 in Mississippi to 20.6 in Oklahoma.
- Combined verbal and mathematics scores on the SAT are reported on a scale of 400 to 1600. The national average score in 1999 was 1016. Among the eight SREB states — Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Texas and Virginia — in which most seniors took the SAT, the average scores ranged from 954 in South Carolina to 1014 in Maryland.

Table 5
**Average scores on national college-admissions tests, 1999**

| State | ACT average score | SAT average score |
|---|---|---|
| Nation | 21.0 | 1016 |
| Alabama | 20.2 | * |
| Arkansas | 20.3 | * |
| Delaware | * | 1000 |
| Florida | * | 997 |
| Georgia | * | 969 |
| Kentucky | 20.1 | * |
| Louisiana | 19.6 | * |
| Maryland | * | 1014 |
| Mississippi | 18.7 | * |
| North Carolina | * | 986 |
| Oklahoma | 20.6 | * |
| South Carolina | * | 954 |
| Tennessee | 19.9 | * |
| Texas | * | 993 |
| Virginia | * | 1007 |
| West Virginia | 20.2 | * |

Sources: American College Testing and The College Board

* Most high school seniors in this state do not take the test.

*Question:*

# Is student achievement improving?

Every SREB state has improved on some measure of student achievement in the last 10 years. States have raised standards and expectations for students. They have improved curricula and implemented policies designed to ensure that high school graduates are prepared for work or postsecondary education. More fourth- and eighth-graders are meeting or surpassing the National Assessment proficient levels in reading and mathematics. More students take college admissions tests, and average scores are as high as or higher than average scores 10 years ago. More high schools offer Advanced Placement courses, and more students take AP exams. Even so, most SREB states' averages on some of the most important and credible measures of student performance remain below the national averages.

## *Changes in the National Assessment results*

From 1992 to 1998, two-thirds of the SREB states improved the percentages of fourth-graders who scored at or above the proficient level on the National Assessment of Educational Progress in reading. The increases in eight SREB states were larger than the national increase of two percentage points. Kentucky had an increase of six percentage points, followed by Maryland and Texas (five percentage points); Alabama, Louisiana, Mississippi and West Virginia (four percentage points); and North Carolina (three percentage points). Florida and Tennessee matched the national increase.

In 1996 (the most recent mathematics assessment), the percentage of eighth-graders with scores at or above the National Assessment's proficient level for mathematics was higher than in 1990 for every SREB state that participated in both assessments. North Carolina's gain of 11 percentage points was higher than the national gain of eight percentage points, and Texas matched the national gain. Kentucky (six percentage points) and Maryland (seven percentage points) came close to matching the national gain.

In 10 of the 15 SREB states that participated in both 1992 and 1996, the percentages of fourth-graders at or above the proficient level for mathematics increased.

Since the early 1990s, there have been increases in the percentages of black and Hispanic students whose scores meet or exceed the National Assessment proficient standards in reading and mathematics. In 11 SREB states the gains in percentages of black fourth-graders at the proficient level in reading outpaced the national average gain for that group.

Table 6
**National Assessment of Educational Progress, Reading, fourth grade, 1992 and 1998**

| | Percent of fourth-graders at or above the *proficient* level | | |
|---|---|---|---|
| | 1992 | 1998 | Change |
| Nation | 27 | 29 | 2 |
| Alabama | 20 | 24 | 4 |
| Arkansas | 23 | 23 | 0 |
| Delaware | 24 | 25 | 1 |
| Florida | 21 | 23 | 2 |
| Georgia | 25 | 24 | -1 |
| Kentucky | 23 | 29 | 6 |
| Louisiana | 15 | 19 | 4 |
| Maryland | 24 | 29 | 5 |
| Mississippi | 14 | 18 | 4 |
| North Carolina | 25 | 28 | 3 |
| Oklahoma | 29 | 30 | 1 |
| South Carolina | 22 | 22 | 0 |
| Tennessee | 23 | 25 | 2 |
| Texas | 24 | 29 | 5 |
| Virginia | 31 | 30 | -1 |
| West Virginia | 25 | 29 | 4 |

Source: National Center for Education Statistics

## *Changes in scores on college admissions tests*

In the 1990s ACT and SAT scores were up in virtually every SREB state, and more high school seniors than ever took these tests. In 1999 average scores on the ACT were higher than in 1990 in seven of the eight SREB states where most high school seniors take the ACT. In the eight SREB states where most high school seniors take the SAT, average scores in 1999 were higher than the 1990 averages in seven states. While the number of students taking the ACT increased by 19 percent nationally between 1989 and 1999, the increase in the SREB states was 32 percent. Likewise, the SREB region's increase in the number of seniors taking the SAT — 18 percent — was higher than the national average increase of 12 percent.

Table 7
**National Assessment of Educational Progress, Mathematics, eighth grade, 1990 and 1996**

| | Percent of eighth-graders at or above the *proficient* level | | |
|---|---|---|---|
| | 1990 | 1996 | Change |
| Nation | 15 | 23 | 8 |
| Alabama | 9 | 12 | 3 |
| Arkansas | 9 | 13 | 4 |
| Delaware | 14 | 19 | 5 |
| Florida | 12 | 17 | 5 |
| Georgia | 14 | 16 | 2 |
| Kentucky | 10 | 16 | 6 |
| Louisiana | 5 | 7 | 2 |
| Maryland | 17 | 24 | 7 |
| North Carolina | 9 | 20 | 11 |
| Texas | 13 | 21 | 8 |
| Virginia | 17 | 21 | 4 |
| West Virginia | 9 | 14 | 5 |

Source: National Center for Education Statistics

Notes: Mississippi, Oklahoma, South Carolina and Tennessee did not participate in both the 1990 and 1996 assessments.
Results for 2000 will be available in the 2000-01 school year.

## *Changes in Advanced Placement*

- Between 1988 and 1999, the number of students who took Advanced Placement examinations in the SREB states increased by 123,000. This increase accounts for 36 percent of the national increase. Eight states — Arkansas, Delaware, Georgia, Mississippi, North Carolina, Oklahoma, Texas and Virginia — had higher increases in the number of Advanced Placement students than the national increase of 151 percent.
- In 1988, only four states — Maryland, North Carolina, South Carolina and Virginia — had 60 percent or more of their public schools involved in the Advanced Placement Program. By 1999, two-thirds of the SREB states had at least 60 percent of schools involved.
- In most SREB states, student performance on the Advanced Placement examinations is the same or better than it was five years ago. Eight SREB states — Alabama,

Table 8
**National Assessment of Educational Progress, Mathematics, fourth grade, 1992 and 1996**

| | Percent of fourth-graders at or above the *proficient* level | | |
|---|---|---|---|
| | 1992 | 1996 | Change |
| Nation | 17 | 20 | 3 |
| Alabama | 10 | 11 | 1 |
| Arkansas | 10 | 13 | 3 |
| Delaware | 17 | 16 | -1 |
| Florida | 13 | 15 | 2 |
| Georgia | 15 | 13 | -2 |
| Kentucky | 13 | 16 | 3 |
| Louisiana | 8 | 8 | 0 |
| Maryland | 18 | 22 | 4 |
| Mississippi | 6 | 8 | 2 |
| North Carolina | 13 | 21 | 8 |
| South Carolina | 13 | 12 | -1 |
| Tennessee | 10 | 17 | 7 |
| Texas | 15 | 25 | 10 |
| Virginia | 19 | 19 | 0 |
| West Virginia | 12 | 19 | 7 |

Source: National Center for Education Statistics

Notes: Oklahoma did not participate in both the 1992 and 1996 assessments.

Results for 2000 will be available in the 2000-01 school year.

Delaware, Florida, Georgia, Louisiana, Maryland, Tennessee and West Virginia — have seen increases in the percentages of examinations that receive scores of 3 or higher. There has been no change in Arkansas, Kentucky and Virginia, and the percentages have dropped in Mississippi, North Carolina, Oklahoma, South Carolina and Texas. Decreases in these states may be attributed to several factors. When a broader segment of students takes the courses and examinations, scores tend to drop. In addition, the quality of instruction may not be as high in schools where Advanced Placement courses are being offered for the first time. Schools may not have provided adequate time to train teachers, and they may have inadequate instructional resources for Advanced Placement courses.

***Is student achievement improving? Yes.***

***Are SREB states making progress? Yes.***

***Is that progress sufficient? No.***

SREB states can be proud of getting closer to national averages on several indicators of student achievement, setting higher expectations for students, and holding students and schools accountable for meeting those expectations. Even so, few would argue that the progress is sufficient.

Will it be good enough for one-third of the students in SREB states to be proficient in reading and mathematics? Will it be good enough for black and Hispanic students in SREB states to do as well as black and Hispanic students nationwide if there continue to be large gaps in achievement among racial and ethnic groups?

The answers are "no," and therein lie the most serious challenges to improving student achievement.

Table 9

**Percent of Advanced Placement exams receiving scores of 3 or higher**

| | 1995 | 1999 |
|---|---|---|
| Nation | 62 | 64 |
| Alabama | 50 | 58 |
| Arkansas | 53 | 52 |
| Delaware | 71 | 73 |
| Florida | 53 | 57 |
| Georgia | 51 | 59 |
| Kentucky | 51 | 50 |
| Louisiana | 60 | 64 |
| Maryland | 69 | 71 |
| Mississippi | 45 | 40 |
| North Carolina | 64 | 57 |
| Oklahoma | 62 | 58 |
| South Carolina | 65 | 56 |
| Tennessee | 58 | 65 |
| Texas | 64 | 56 |
| Virginia | 63 | 63 |
| West Virginia | 44 | 56 |

Source: The College Board

*Question:*

# What major challenges remain?

*The first step is to establish clear standards for what students should know and be able to do at each grade level and before they graduate from high school.*

Content standards define what students should know. Performance standards define how well students should know the content.

Content standards are the foundation for improving student achievement. If the standards are too broad and vague, they will provide no direction. They need to be detailed enough to provide a clear direction for what content and skills students need, but they should not be so detailed that they dictate or restrict successful teaching styles and strategies.

In the last 10 years, all SREB states have examined and revised — or created — content standards for students. States use different terms — curriculum frameworks, standards of learning, learning expectations — to refer to these standards. They have varying levels of detail. Various groups have incorporated their own assumptions, criteria and philosophies into their evaluations and grading of states' standards.

Two recent reports — *Quality Counts 2000* and *The State of State Standards 2000* — evaluated states' standards and accountability systems. Both reports based their grading on whether a state had established content standards in core subjects and how well its education system combined good standards with assessment and accountability programs.

*Quality Counts 2000*, the Education Week/Pew Charitable Trusts report on education in the 50 states, evaluated state standards and accountability. Grades were based on whether states had established content standards in English, mathematics, social studies and science and whether state assessments matched those standards. Thirteen SREB states — Alabama, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, North Carolina, Oklahoma, South Carolina, Texas, Virginia and West Virginia — were assigned A's or B's.

In *The State of State Standards 2000* the Fordham Foundation reported that states are beginning to write stronger standards that are more detailed, cover more content and are less likely to delve into issues related to teaching strategies. The report gave "honors grades" (A's or B's) to eight states nationwide based on their standards for English, history, geography, mathematics and science. Two years earlier, only three states received "honors grades." Four SREB states — Alabama, North Carolina, South Carolina and Texas — were among the eight that received "honors grades" in the most recent report. Most other SREB states received C's.

Performance standards are based on content standards and describe how well students should learn the material specified in the content standards. They should answer the question "How good is good enough?" Performance standards define levels of proficiency and can give teachers, students, parents and school leaders a clearer picture of what it means to meet a standard.

How can states tell whether performance standards are high enough? In the SREB states, performance standards are based on what it means to "pass" or to be "proficient." The challenge is to create standards that match what the public, employers and colleges expect. Because they expect different things, this task is not easy. Each state's standards need to be competitive with those in other states or with international standards. States can get help in setting high standards by looking to external measures, such as the National Assessment of Educational Progress, or to other states' tests and results.

## *Assessments need to be linked directly to the standards.*

Whatever test is used should measure what students are expected to learn and what teachers are expected to teach. States without clearly defined content standards will be at a disadvantage in developing or choosing a test.

Any measure of student achievement has strengths and weaknesses, and there may not be one that can provide all the information needed. An assessment needs to be credible to be used in making decisions about promotion, graduation, rewards or sanctions. To assess your state's testing program, ask whether it:

- measures what it is supposed to measure;
- provides sample tests to familiarize students, teachers and the public with what is being tested and how;
- measures problem-solving and thinking and reasoning skills, not just knowledge of facts;
- includes items that require students to supply answers or to write answers as well as multiple-choice items;
- has enough items to sample students' knowledge and to report consistent results; and
- generates results that can be used to judge students' progress from year to year.

Are your state's assessments:

- given under the same conditions and scored in the same way at different locations; and
- reviewed regularly to ensure that test questions are fair for all groups of students?

Several SREB states use end-of-course or end-of-grade tests to determine whether students have mastered the content and skills specified in state content standards. North Carolina, Tennessee and Texas have the most extensive lists of end-of-course tests. These tests often have resulted in more consistency in the content taught in school districts statewide.

When the "pass" rate on a state test is low, the state tends to review the test, how it is given, its alignment with the curriculum and how results compare with results on other tests. The state examines performance standards to see whether they are too high. One state's review of its mathematics standards and assessment concluded that students were not performing well because teachers were not focusing on the material emphasized in the standards and assessment. That state is working to ensure that all districts teach the mathematics content that students should know, as defined by state standards.

## *States need to make sure teachers and principals know the standards and develop instructional strategies to help students master the required content and skills.*

Having high standards and good assessments will not improve student achievement unless the standards are accompanied by good instruction. Standards first must be woven into the fabric of school districts and individual schools by developing curricula, lesson plans and instructional strategies based on the standards. Thus, states need to provide principals (as instructional leaders) and teachers with help in becoming familiar with the standards and with what assessment results tell them about student learning. States also need to provide them with resources (such as textbooks and laboratory equipment) that support the curriculum and teaching strategies. Teacher preparation programs and professional development need to help experienced teachers as well as new teachers understand the standards and develop ways to teach students the knowledge and skills described by the standards.

Incorporating new standards into all classrooms takes time, and results are not immediate. Most SREB states' standards are too new to produce credible results. In SREB states that have been implementing standards for a longer time, test scores appear to be improving. Kentucky, Maryland, North Carolina and Texas are examples of such states.

Professional development needs to help teachers and principals to interpret the results of assessments and to use them in improving performance by students and schools. The Southern Regional Education Board's *High Schools That Work* initiative is an example. *HSTW* measures student performance in participating high schools and provides each school with the results. *HSTW* then trains principals and teachers in each school to understand the results and to use them in developing strategies for improvement.

One thing is clear: Unless teachers and principals understand and support the standards and assessments, it will be impossible to implement the standards and develop ways to help students meet higher expectations.

## *Eliminate the disparities in student achievement among different groups.*

As noted in this and other SREB reports, most SREB states continue to trail the national averages on several important measures of student achievement. Previous SREB reports have shown that students from low-income families in SREB states do not perform as well as low-income students nationwide. Students in rural areas of the South score lower than students in rural areas nationwide. Female students in SREB states do not perform as well in mathematics and science as the region's male students or as female students nationwide.

In most SREB states, the percentages of black and Hispanic fourth-graders who met the National Assessment standards for proficiency in reading and mathematics are similar to — and, in some cases, exceed — the national averages for black and Hispanic students. Even so, *the gaps in achievement between white and black students and between white and Hispanic students are unacceptably large.* For example, 11 percent of black fourth-graders and 15 percent of Hispanic fourth-graders in Texas met the National Assessment proficient

standard in reading. These numbers are higher than the national averages of 9 percent for black students and 12 percent for Hispanic students. In Texas, 43 percent of white fourth-graders met the proficient standard, compared with 38 percent nationally.

SREB states need to realize that, in many cases, the gaps among groups of students within the states are larger than the gaps between SREB state averages and national averages. For example, 29 percent of the nation's fourth-graders scored at or above the proficient standard on the 1998 National Assessment of reading, and Maryland met the national average. Yet there is a large gap between the percentages of white (40 percent) and black (11 percent) fourth-graders in Maryland who met the proficient standard. Closing such gaps among groups of students within states would go a long way toward helping states gain ground on national averages for all students.

Consider these facts:

- Black and Hispanic students in SREB states and nationwide have lower achievement levels than white students. According to the National Assessment, the percentage of white fourth-graders who are proficient readers is four times that of black students (38 percent and 9 percent, respectively) and three times that of Hispanics (12 percent). There is a similar pattern for eighth-graders.
- Students from rural areas and central cities in the South have lower achievement levels than students from the suburbs. For example, 21 percent of eighth-graders who live in suburban areas meet or exceed the proficient level in mathematics, compared with 17 percent of those in central cities and 13 percent of those in rural areas.
- Students from low-income families have lower achievement levels than students from more affluent families. In addition, students from low-income families in SREB states have lower achievement scores than students from low-income families nationwide.
- Black students, Hispanic students and students from low-income families represent an increasing proportion of the enrollments in public schools. In Louisiana, Mississippi and Texas, black and Hispanic students outnumber white students in public schools. Minorities account for more than 40 percent of the students in public schools in Florida, Georgia, Maryland and South Carolina; at least one-third of students are minorities in Alabama, Delaware, North Carolina, Oklahoma and Virginia. Population projections show that minority students will represent an even larger proportion of school enrollments by 2010.

These facts demonstrate that the goal of helping more students meet higher standards is difficult and necessary for the future of every SREB state.

*High expectations initially may bring higher numbers of students who fail and who drop out of school.*

When states set higher standards and implement more challenging assessments, the initial result may be sizable numbers of students who do not meet those expectations. To raise student achievement, states need to do more than adopt new standards and assessments. Their comprehensive approach also needs to include strong incentives for students and schools to meet the standards; assistance to low-performing schools and students; improved instruction; and strong leadership. Kentucky, North Carolina and Texas have reduced significantly the numbers of schools identified as "failing" in some districts. Scores on state assessments and national assessments have improved.

Many people fear that setting high expectations will result in too many students who fail and who drop out of school. States should work to prevent this situation by having programs that combine efforts to improve teacher training; increase parental involvement; and help schools learn to identify struggling students early and to provide them with the assistance they need to catch up. Efforts to help students who are falling behind may include tutoring, intensive classes in reading and mathematics, after-school assistance and extended-year (summer) programs.

*Question:*

## What have we learned?

Most SREB states renewed efforts to improve student achievement in the mid-1980s to the late 1980s. Some of the lessons learned:

- It is difficult to reach consensus on what students should know and be able to do. Unless state leaders, school superintendents, principals, teachers and parents define content standards, publishers of textbooks and tests will determine what is taught and learned.
- How student achievement is measured must be linked directly to the standards. Decide what you want students to learn. Teach what you want students to learn. Test what you want students to learn. Use the test results to improve teaching and learning.
- States have learned that some forms of assessment (such as evaluations of projects and portfolio assessments) can encourage students to apply knowledge and skills in solving problems. States also have learned that these assessments may not be reliable enough to be used in accountability systems. It is especially important to avoid relying totally on "cutting-edge" assessments when results will influence high-stakes decisions regarding student promo-

tion and graduation, identification of low-performing schools, and incentives or sanctions for schools and teachers. Kentucky learned that lesson and has revised its accountability testing system to include more traditional forms of assessment for identifying high-performing, low-performing and improving schools. Kentucky will continue to assess performance and portfolios but will place less emphasis on those assessments in evaluating school performance and improvement.

- Good testing is not cheap. States need to invest in more than just a test if they are to provide assessments that are aligned with standards and are fair, reliable and credible. The costs of assessment systems include developing the tests; providing teachers, students and the public with versions of the tests or sample items; scoring and reporting results; and helping teachers, school leaders, students and parents interpret the results.
- Parents want to know whether their children are meeting challenging standards *and* how their children compare with others nationwide. Assessment systems need to include measures that can be used to compare student performance regionwide and nationwide.
- State and national average scores do not tell us enough about student achievement. Reporting results by levels of proficiency can focus efforts on helping all students improve. Reporting results for different groups of students (such as black, white and Hispanic; rural and urban; low-income and affluent; male and female) can help identify gaps in achievement levels that need to be addressed by special efforts and assistance. Reducing the disparities in student achievement among different groups and among students from families of varying incomes is crucial to improving student achievement in the SREB states.
- In deciding how high to set standards, states can compare their standards for student achievement with those set by other states and with those for the National Assessment of Educational Progress.
- Setting low expectations in hopes of preventing high numbers of student failures and low-performing schools is not likely to improve student achievement.
- It is not enough to adopt high expectations and challenging standards and assessments. A state's comprehensive approach to accountability also should include efforts to improve teaching and school leadership; provide incentives for high-performing and improving schools; assist low-performing students and schools; increase parental involvement; and report to the public on progress toward achieving goals.
- High expectations for students need to be accompanied by high expectations for teachers and school leaders.
- Assessments without consequences are unlikely to bring improvements. States need strong accountability systems that encourage students, teachers and schools to succeed and reward them for meeting high expectations. But these systems also need to have clear consequences for those who do not meet the standards.
- Improving student achievement takes time. States need to set a course and stay with it long enough to see whether it works. Some corrections will be necessary along the way, but making frequent and dramatic changes is a failed strategy.